

SPRAY APPLICATION SYSTEM

Abstract of the Invention

Fig. 1
A spray application system is disclosed having an enclosure with a spray chamber, a spray applicator within the chamber, and at least one liquid barrier within the chamber, disposed upstream or downstream of the spray applicator. The liquid barrier may take the form of a sprayed water curtain. The water forming the liquid barrier is preferably sprayed in a downward direction to create a vacuum for drawing the treating substance downward into the liquid barrier.

10 Each liquid barrier is also preferably disposed so that it does not contact the workpieces as the workpieces pass through the chamber, the workpieces instead passing above each liquid barrier.

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Independent pressure gauges and flow regulators may be used for the upstream liquid barrier, the downstream liquid barrier, and the spray applicator. Each liquid barrier may be created using a header assembly with one or more nozzles, and the nozzles may be disposed on opposite sides of the chamber and directed toward a center portion of a width of the chamber to create the barrier or curtain. The chamber may have a roof section that is secured to a beam or other process line support, and the walls may be secured to and suspended from the roof section. In a preferred, alternate embodiment, the roof section may have an opening running across its length to allow hangers from a processing line disposed above the chamber to pass through the chamber. Access doors may be provided on both sides of the chamber.